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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
Division of Forest Insect Investigations

ANNUAL REPORT OF FOREST INSECT CONTROL IN THE CHARLTON FLATS-CHILAO FLATS-BARLEY FLATS INFESTATION AREA, ANGELES NATIONAL FOREST

FISCAL YEAR 1953

Charlton, Chilao, and Barley Flats are located along the Angeles Crest Highway north of Los Angeles within T.2 & 3N and R.11 & 12W on the Arroyo Seco District, Angeles National Forest. These three areas are situated along the crest of the San Gabriel Mountains.

Charlton Flats and Chilao Flats are intensively used recreational areas within easy reach of metropolitan Los Angeles. Both receive heavy use year-round, and are therefore extremely valuable as recreational areas. Because it is the timber that makes them desirable, it is especially important that each and every tree be protected for as long as possible by whatever means protection can best be accomplished. Barley Flats is not now being used as a recreational area other than by hikers. However, it is the next most important government-owned recreational area in the vicinity, and, because of its potentialities, warrants the same protection given to Charlton Flats and Chilao Flats.

Insect control has been carried on in Charlton Flats and Chilao Flats for several years now with varying degrees of success. During the past year a program of year-round maintenance control has been carried on. This has resulted in a decided reduction in loss, particularly in Charlton Flats. Not only does this system of control prevent the pyramiding of insect populations during the summer months, but it also distributes the insect control work-load over the whole year.

Insect and Host Species

Within each area, Coulter pine and Jeffrey pine are the predominant species, with some ponderosa pine being found in Charlton Flats. A few scattered incense cedar, sugar pine, and bigcone spruce are found through part of the areas.

Host and major insect species are as follows:

Coulter pine - western pine beetle, Dendroctonus brevicomis Lec.; and the California five-spined engraver, Ips confusus (Lec.)

Jeffrey pine - California flatheaded borer, Melanophila californica Van Dyke; and the California five-spined engraver, Ips confusus (Lec.)

Ponderosa pine - western pine beetle, D. brevicomis Lec.; the California flatheaded borer, M. californica Van Dyke; the California five-spined engraver, I. confusus (Lec); and the mountain pine beetle, D. monticclae Hopk.

Sugar pine - the mountain pine beetle, D. monticolae Hopk.; and the California five-spined engraver, I. confusus (Lec.)

The Infestation

Western pine beetle populations have been on the decrease the past year because of the fine job of year-round maintenance control which has been under way. In the past no control was attempted on flatheaded borers in these areas but this past season marked the start of flathead control in Chilao Flats. This is primarily an experimental undertaking but results similar to those obtained with western pine beetle broods are expected. A few of the treated flathead trees have been examined and in each case no living larvae, pupae or adults were found. At the time of spraying all the flatheads were in the larval stage.

If the present program of year-round maintenance control is continued, it is expected that a decided reduction in all insect populations will soon result and a minimum of effort will be needed to hold insect damage in check.

The Control Operation

Control was carried on throughout the fiscal year 1953 as trees were spotted. The project, being entirely on Federal lands, was administered by the U. S. Forest Service under the direction of Raymond S. Dalen. The treating crews consisted of inmate labor supervised by Forest Service foremen.

All infested trees, including those containing flatheaded borers, were treated with a penetrating oil spray consisting of 1 part ortho-dichlorobenzene and 6 parts of diesel fuel. The trees were first felled, then bucked into suitable lengths and then rolled as they were sprayed. The spray was applied to all portions of the main bole of the tree and the limbs lopped and scattered where they fell easy prey to the many nearby campers.

Number of trees spotted	
Western pine beetle infested	112
Flathead infested	23
Total	135

Number of trees treated	
Western pine beetle infested	112
Flathead infested	23
Total	135
Average D.b.h.	21.94
Man days (including contributed time)	343
Trees per man day	.39
Approx. gals. of ortho used	150
Approx. gals. of diesel fuel used	900
Average number of gals. of spray per tree	7.77

Technical assistance was furnished by the Forest Insect Laboratory, Berkeley, California.

Costs

Total expenditures for the project were approximately $1,320.92. This is an average cost per tree treated of approximately $9.78. This figure is somewhat lower than the costs on other similar projects, partly because a good deal of the labor, particularly inmate labor, was contributed time.

Recommendations

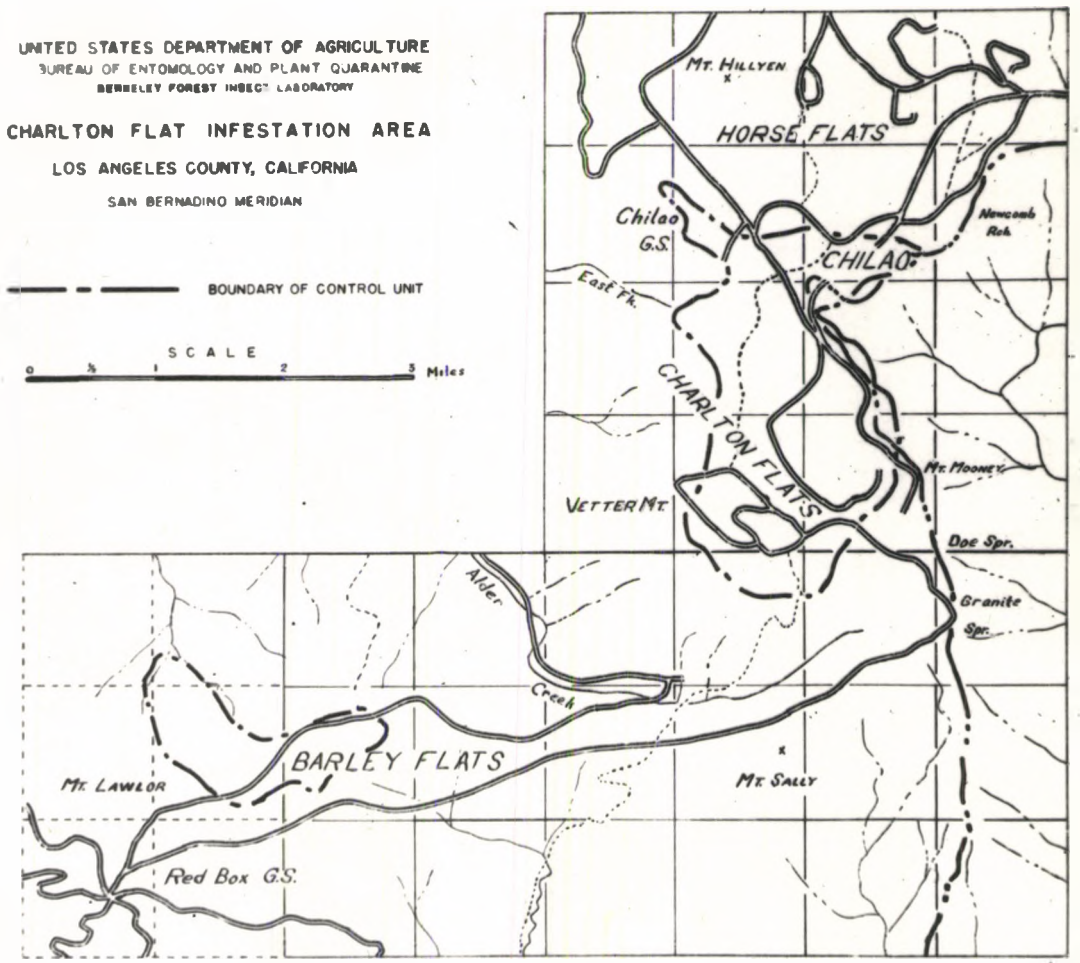
1. That the present system of year-round maintenance control be continued.

2. That a close study of Chilao Flats be made by the Forest Insect Laboratory to ascertain the degree of control obtained by treating flathead-infested trees.

3. That where possible currently infested and salvable abandoned trees be taken out through logging, particularly in Horse Flats above Chilao Flats. In certain areas high-risk trees could also be included in the logging operation.

Forest Insect Laboratory
Berkeley, California
August 28, 1953

G. L. Downing
Entomologist


UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
BERKELEY FOREST INSECT LABORATORY
CHARLTON FLAT INFESTATION AREA
LOS ANGELES COUNTY, CALIFORNIA
SAN BERNADINO MERIDIAN
BOUNDARY OF CONTROL UNIT
SCALE
0 ½ 1 2 3 Miles
Mt. Hillyer
HORSE FLATS
Chilao G.S.
CHILAO
Newcomb Rch.
East Fk.
CHARLTON FLATS
Mt. Mooney
Vetter Mt.
Doe Spr.
Granite Spr.
Alder Creek
BARLEY FLATS
Mt. Lawlor
Mt. Sally
Red Box G.S.